

REMARKSI. Status of the Claims

Claims 1-9 and 11 are pending. Applicants cancel claims 1-9 and 11 and present new claims 12-20 in this response. Upon entry of the amendment, claims 12-20 will remain for consideration.

II. Response to the Section 102 Rejection based on Rieger

Applicants traverse the rejection of claims 1-9 and 11 under 35 U.S.C. § 102(b) as anticipated by Rieger (U.S. Pat. No. 6,576,726) and respectfully ask the Examiner to reconsider and withdraw the rejection in view of their claim amendments and the following remarks.

The Examiner says that Rieger's complexes of formula VII fall within Applicants' general formula (I). Applicants have overcome the rejection by presenting new claims that exclude the complexes taught or suggested by Rieger. In particular, the now-claimed organometallic transition metal compounds require that R^3 be a "substituted or unsubstituted C_6-C_{40} aryl radical." In Rieger's complexes, the substituent in the position for R^3 is always hydrogen, and there is no suggestion to use anything else. The propylene polymers made using Rieger's complexes also appear to be quite different from the ones made using Applicants' claimed complexes: Rieger's polypropylenes, for instance, melt at about 50°C (see col. 6), while polypropylene made using Applicants' claimed compounds melt at or above 150°C (page 55, top table). In view of the amendment, the Examiner should reconsider and withdraw the rejection.

III. Response to the Section 102 Rejection based on Chen et al.

Applicants traverse the rejection of claims 1, 3, 5-9, and 11 under 35 U.S.C. § 102(b) as anticipated by Chen et al. (U.S. Pat. No. 6,084,115) and respectfully ask the Examiner to reconsider and withdraw the rejection in view of their amendments and the following remarks.

Chen teaches Group 4 metal bis(indacenyl) complexes such as dimethylsilyl-bis(3-phenylindacenyl)titanium (1,4-diphenyl-1,3-butadiene). Also disclosed by Chen are complexes that incorporate a saturated C₅ or C₆ ring that is fused to the indenyl ring (col. 5, ll. 40-45).

Applicants' new claims exclude "indacenyl" complexes such as the particular complex identified by the Examiner because they now require a fused saturated C₅ or C₆ ring (on the indenyl) rather than a benzene ring. The amended claims also exclude complexes of the type suggested in col. 5 because because Applicants' formula (I) requires that R⁵ be "an organic radical which has from 3 to 20 carbon atoms and is branched in the α position." In Chen's disclosed complexes, this position is a hydrogen atom. Because the new claims exclude the particular complexes taught by Chen, the Examiner should reconsider and withdraw the Section 102 rejection.

IV. Response to the Section 102 Rejection based on Hashimoto et al.

Applicants traverse the rejection of claims 1, 3, 5-9, and 11 under 35 U.S.C. § 102(b) as anticipated by Hashimoto et al. (U.S. Pat. No. 6,156,844) and respectfully ask the Examiner to reconsider and withdraw the rejection in view of their amendments and the following remarks.

The Examiner points to two structures at the top of col. 2 of Hashimoto. Each of these complexes shows a dimethylsilyl-bridged bis(indacenyl) ligand. The new claims exclude such complexes because they require a fused saturated C₅ or C₆ ring (on the indenyl) rather than a benzene ring. These complexes also lack the claim requirement that R⁵ be "an organic radical which has from 3 to 20 carbon atoms and is branched in the α position." In view of the amendments, the Examiner should reconsider and withdraw the rejection.

V. Response to the Section 102 Rejection based on Okada et al.

Applicants traverse the rejection of claims 1, 3, 5-9, and 11 under 35 U.S.C. § 102(b) as anticipated by Okada et al. (U.S. Pat. No. 6,194,501) and respectfully ask the Examiner to reconsider and withdraw the rejection in view of their amendments and the following remarks.

The Examiner points to the bis(benzo[f]indenyl) compounds tabulated in column 13. As noted above, the new claims exclude such benzo-fused systems because the claims require the fused ring to be a saturated C₅ or C₆ ring. Moreover, R¹ in the reference structures is hydrogen or methyl rather than Applicants' required C₃-C₂₀ organic radical that is branched at the α position for the corresponding position, R⁵. In view of the amendment, the Examiner should withdraw the Section 102 rejection based on Okada.

VI. Conclusion

In view of the remarks above, Applicants respectfully ask the Examiner to enter the amendments, reconsider and withdraw the rejections, and pass the case to issue. Applicants invite the Examiner to telephone their attorney at (610) 359-2276 if he believes that a discussion of the application might be helpful.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, P.O. Box. 1450, Alexandria, VA 22313-1450 on June 4, 2008.

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Respectfully submitted,
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